

## ABSTRAK

### PRARANCANGAN PABRIK *SODIUM CARBOXYMETHYLCELLULOSE* DARI *CELLULOSE* DAN *NATRIUM MONOCHLOROACETIC* KAPASITAS 50.000 TON/TAHUN (Perancangan *Rotary Reactor* (RE-201))

Oleh

**INNES ALIYA PUTRI**

Pabrik *sodium carboxymethylcellulose* berbahan baku *cellulose* dan *natrium monochloroacetic*, akan didirikan di Purwakarta, Jawa Barat. Pabrik ini berdiri dengan mempertimbangkan ketersediaan bahan baku, sarana transportasi yang memadai, tenaga kerja yang mudah didapatkan dan kondisi lingkungan.

Pabrik direncanakan memproduksi *sodium carboxymethylcellulose* sebanyak 50.000 ton/tahun, dengan waktu operasi 24 jam/hari, 330 hari/tahun. Bahan baku yang digunakan adalah *cellulose* sebanyak 5.315 kg/jam dan *natrium monochloroacetic* sebanyak 441,56 kg/jam.

Jumlah karyawan sebanyak 150 orang dengan bentuk perusahaan adalah Perseroan Terbatas (PT) menggunakan struktur organisasi *line* dan *staff*.

Dari analisis ekonomi diperoleh:

<i>Fixed Capital Investment</i> (FCI)	= Rp 261.117.647.247,00,-
<i>Working Capital Investment</i> (WCI)	= Rp 46.079.584.808,29,-
<i>Total Capital Investment</i> (TCI)	= Rp 307.197.232.055,30,-
<i>Break Even Point</i> (BEP)	= 46%
<i>Shut Down Point</i> (SDP)	= 26,5%
<i>Pay Out Time after Taxes</i> (POT) <sub>a</sub>	= 3 tahun
<i>Return on Investment after Taxes</i> (ROI) <sub>a</sub>	= 24,79 %
<i>Annual Net Profit</i> (Pa)	= Rp 76.159.150.526,77/tahun

Mempertimbangkan paparan di atas, sudah selayaknya pendirian pabrik *sodium carboxymethylcellulose* ini dikaji lebih lanjut, karena merupakan pabrik yang menguntungkan dan mempunyai masa depan yang baik.

## ABSTRACT

### **PRADESIGN OF SODIUM CARBOXYMETHYLCELLULOSE PLANT FROM CELLULOSE AND NATRIUM MONOCHLOROACETIC CAPACITY 50.000 TONS/YEAR (Design Rotary Reactor (RE-201))**

By

**INNES ALIYA PUTRI**

A plant to produce sodium carboxymethylcellulose from cellulose and *natrium monochloroacetic* is planned to be located in Purwakarta, West Java. The plant is established by considering availability of raw materials, transportation facilities, readily available labor and environmental conditions.

Capacity of the plant is 50.000 tons/year operating 24 hour/day and 330 working days/year. The plant requires 5.315 kg/hr cellulose and 441,56 kg/hr *natrium monochloroacetic*.

Quantity of labor is around 150 people. The plant is managed as a Limited Liability Company (PT), which is headed by a Director who is assisted by a Director of Production and Director of Finance. The company is organized in the form of line and staff structure. From analysis of the plant economy, it is concludes :

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<i>Pay Out Time after Taxes (POT)<sub>a</sub></i>	= 3 years
<i>Return on Investment after Taxes (ROI)<sub>a</sub></i>	= 24,79 %
<i>Annual Net Profit (Pa)</i>	= Rp 76.159.150.526,77/year

By considering the summary above, the pradesign is suitable to study further.